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AUTHOR Backstrom, Lars G.; Pedersen, Odd
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ABSTRACT

A study of those students taking vocationally-oriented courses in the arts and sciences faculties of Swedish universities examined background variables among the students as well as questions concerning the design and effectiveness of the courses. These courses are one term in length and organized to ease the transition from university studies to professional work, providing a comprehensive picture of the field in question. The survey sample consisted of 1,326 of the 2,625 students who enrolled in the fall term of 1971 and spring term of 1972 in a vocationally-oriented course, completed it, and passed the examination. The mean age of students was 28.1 years, 44% of them female, and 25% part-time students. Forty-four percent took the vocationally-oriented course as a part of full-time general university studies and represented lower middle class (47%) and upper middle class (30%) social status. Adult students tended to be employed to a greater extent than regular students and their employment was more often within the course area. The results were favorable in terms of the types of students utilizing the vocationally-oriented courses and in terms of course effectiveness. There were considerable differences between the courses in other areas, e.g., background variables such as sex, employment situation, and purpose of studies as well as the ratings concerning the effectiveness/usefulness of the course. (ND)

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Scientific Advisor: Lars G Bäckström, Senior Lecturer

Project Leader: Odd Pedersen, B.A.

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1 Background

The debate over whether or not to have a stronger vocational orientation in arts and science courses offered at Swedish universities has a rather long history in Sweden. Both at administrative levels and from the students themselves, suggestions and demands have been made for an education which, to a greater extent, reflects more of an emphasis on future vocational activity. In 1968, the Office of the Chancellor of the Swedish Universities (UKÄ) established a committee, The Advisory Committee on University Vocationally-Oriented Courses (DYRK) whose purpose was to investigate the question about organizing vocationally-oriented courses, as a start, in the arts and science faculties of Swedish universities.

The Committee stated that the courses should attempt to bridge the gap between more theoretical studies and vocational activity through, e.g., providing the opportunity for learning more technical skills of a general nature, orientation to different jobs within the fields covered by the courses, and guidance as to how the theoretical knowledge acquired in the courses could be applied in more practical settings. The courses, according to the Committee's aims, should be of one term's length (20 points) and organized with the main purpose of easing the transition from university studies to professional work. They should also offer the opportunity for continued and further education for those

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already employed in various fields. In this connection, the courses should not emphasize one particular direction or position, but rather, the goal for every course should be to present as comprehensive a picture of the field in question as possible.

In 1969, only 2 such courses were organized: Labour Market Technology (arbetsmarknadsteknik) and Environment Conservation (miljövård), but the number and types of courses available has subsequently expanded and included, in 1971, 10 courses and in 1975 more than 20 courses. At present, students can choose among a variety of different courses at Swedish universities, the probability being that more courses will be offered as new fields of study are developed.

2 Purpose

Due to the special nature and goals of the vocationally-oriented courses, their evaluation has been an important concern. In the fall term of 1972 such an evaluation project was initiated at the Department of Education, Linköping University. Due to different reasons which will not be elucidated here, the purpose ot the evaluation was changed to encompass a descriptive study of those students taking vocationally-oriented courses, originally, in terms of different background variables among the students, but, subsequently, including questions concerning the design and effectiveness of the courses as well.

Courses included in the survey:

1. Administration Technology (Administrativ teknik)
2. Labour Market Technology including Personnel Administration (Arbetsmarknadsteknik med personaladministration)
3. Educational Technology (Undervisningsteknologi)
4. Information Technology (Informationsteknik)
5. Problems of Developing Nations and Assistance Technology (U-landsfrågor med biståndsteknik)
6. Drama (Dramatik)
7. Museum Technology (Museiteknik)
8. Forest Technology (Skoglig produktionslära)
9. Environment Conservation (Miljövård), short course (10 points)
10. Environment Conservation, extended course (40 points)

3 Method

3.1 Subjects

The population was defined as those students who were enrolled in a vocationally-oriented course, completed it, and passed the examination. Because of the vast number of students falling into this category, further limitations were necessary. The primary population was thus defined as those students who were enrolled

in such courses in the fall term of 1971 or the spring term of 1972 There were 2, 625 such students who had passed their examinations, and 1, 326 of them were selected to take part in the survey.

Because one of the original purposes of the survey involved a more long-term comparison of specific courses over a number of consecutive terms, it was also necessary to include subjects who, for a limited number of courses, had enrolled in a term earlier than the fall, 1971 and later than the spring, 1972. Although this particular comparison was not carried out, there were certain other analyses in which this group was added to the primary population (the number of students falling into this category being 418 of which 298 were selected to participate in the survey). Thus the term secondary population will refer to these additional students plus the primary population and consists of 3, 043 (2, 625 + 418) students of which 1, 624 (1, 326 + 298) were selected to participate in the survey.

3.2 Questionnaires

Questionnaires were mailed to the subjects and approximately 80 % were returned. The dropout group did not differ from the respondent group in terms of sex, but the mean age of the dropout group was lower than that of the respondent group (primary population, M = 27. 0 and 28.1 respectively).

4 Results

Limitations have had to be made concerning the processing and evaluation of the data collected and, therefore, only answers to a limited number of questions have been attempted.

Summaries of the results are presented below under various headings. Also indicated is whether the results pertain to the primary or secondary population. In certain cases, data from other sources have also been used as a means of comparison with the data from the main populations.

4.1 Results concerning subjects' general background before taking the vocationally-oriented courses and their situation while taking and after having completed the courses (Primary population)

Age: The mean age of the students was 28.1 years. 42 % were under 25 years of age and 31 % were 29 years of age or more. The women were younger than the men (M = 24.4 and 28.6 respectively). The mean age of students in arts and science faculties for the fall term of 1971 was 24.4 years, the corresponding figure for students taking vocationally-oriented courses was 27.1 years.

Sex: The proportion of women was 44 %, which did not deviate from the proportion of women in arts and science faculties. Sex distribution in the various courses generally followed the usual pattern whereby women were underrepresented in courses falling within the science faculties and overrepresented in courses falling within the arts faculties.

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Employment situation: Over half of the students had been employed for a continuous period of at least one year before beginning the course. Of this number, just over half (i.e., 29 % of the entire population) had been employed, to a lesser or greater extent, within the area covered by the course which they were taking.

Previous studies: 79 % of the subjects had completed at least one term's study in arts and science faculties over and above the vocationally-oriented course(s) and of these, 70 % had acquired at least 80 points (out of the 120 points required for the first university degree) before beginning the course. Of those who had only taken the vocationally-oriented course, in arts and science faculties, 74 % were men, the mean age was high (M = 30.3 years), 86 % had been employed for a continuous period of at least one year, and 73 % had been employed for at least four years.

4.1.2 Results concerning subjects' situation while taking the vocationally-oriented course

Study intensity: On the basis of criteria of study intensity (see UKÄ report, 1974, p. 11) we have found that approximately 25 % of the students can be classified as part-time students. Of the full-time students, 23 % were employed to a lesser or greater extent during their term of study. Thus, study intensity was not 100 % for all full-time students. Of the entire group of students, 55 % stated that they had not been employed at all while taking the course and that they had mainly been occupied with their studies during this time.

4.1.3 Results concerning subjects' situation after having completed the vocationally-oriented course

- During a designated week, from March 18 - 24, 1974:
  - 76 % of the former students were employed
  - 2 % were unemployed
  - 2 % were at home and were not, at the time, seeking employment
  - 16 % were studying
  - 4 % fell into other categories
- 73 % of the women and 78 % of the men were employed. Of those who were employed, 88 % were employed full-time and 82 % had permanent jobs.
- 64 % (71 % of the women and 58 % of the men) had taken degrees
- 11 % had taken two or three vocationally-oriented courses in different fields.

4.2 Classification of subjects (Secondary population)

The subjects were divided into two main groups: adult students and regular students. Adult students were defined as those who have the normal qualifications (or special permission) to study and have been employed for a continuous period of at least one year. Another more specific group of adult students were those admitted under special admission (in Sweden there is a law allowing adults who

are at least 25 years of age, who have worked for at least five years, and who fill certain special requirements for the courses in question to study). This group is here called "students with non-academic qualifications".

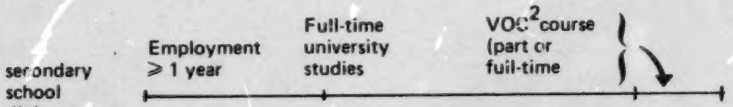
Regular students are those who have the normal qualifications (or in some cases special permission) to study and who usually go directly to university from secondary school but who may have worked for a continuous period of less than one year.

Thus, the following four groups were distinguished among the subjects:

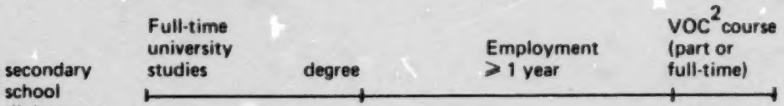
1. Students with "non-academic qualifications"	14.1 %	Adult students
2. Students with normal qualifications (or special permission) and at least four years' working experience	19.9 %	
3. Students with normal qualifications (or special permission) and between one and four years' working experience	15.9 %	
4. Regular students	50.2 %	

The results show that there were generally rather considerable differences, not only between the adult and regular students, but also among the groups of adult students alone with respect to the variables studied, depending on in what sequence regular university studies, employment, and the vocationally-oriented course occurred. We have therefore, in order to better explain these differences, classified the majority of adult students (excluding the adult students of group 1[1]) as fitting into one of the following patterns:

a) 44 % took the vocationally-oriented course (part or full-time) as a part of full-time general university studies which had followed a period of employment.



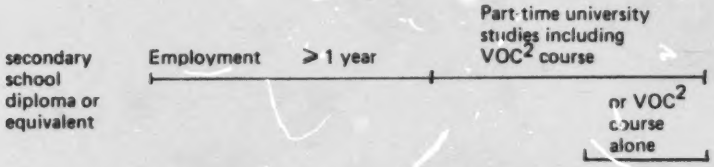
b) 17 % took the vocationally-oriented course (part or full-time) after a period of employment following university studies which had culminated in a degree



[1] At the time of the study, adult students in this category were limited to 60 points of study

[2] VOC = vocationally-oriented

c) Approximately 22 % had, after completing secondary school education or less, been employed and then had either taken only the vocationally-oriented course or taken it as part of part-time university studies



The remaining 17 % could not be classified in these terms, some of them, for example, because during one or more of the terms covered in the survey they had had some other occupation than studies or employment.

For many reasons, the percentages given above are uncertain, in part due to the fact that the figures are based on no more than three consecutive terms and refer only to students enrolled in the spring term of 1972.

4.3 Social class distribution of subjects (Secondary population)

The subjects fell into the following social classes:

1. Upper and upper middle class (30 %)
2. Lower middle class (47 %)
3. a. Skilled workers (13 %)
   b. Unskilled workers (10 %)

These students differed from other students in arts and science faculties in terms of social class distribution in that they included a smaller proportion of members from social class 1 (30 % vs. 40 % in arts and science faculties). In addition, a larger proportion of students were from social class 2 compared to ordinary students (47 % and 38 % respectively). Although these comparisons were based on new enrollments in arts and science faculties for the academic year 1968/69, the writer does not believe that the social class distribution for arts and science students differed during subsequent years.

The social class distribution of the women differed from that of the men. Women from social classes 3.a. and b. were especially under-represented (16 % vs. 29 % for men).

The various groups of students (i.e. adult and regular students) also differed with regard to social class background. For example, 44 % of those entering university with "non-academic qualifications" (group 1) came from social classes 3.a. and b., while only 18 % of the regular students came from these classes.

[2] VOC = vocationally-oriented

There were also differences in social class distribution between the various courses. For example, 35 % of those taking the Labour Market Technology Course (arbetsmarknadsteknik) came from social classes 3.a. and b. while only 5 % of those taking the Museum Technology Course came from these groups.

4.4 Results concerning the integration of the vocationally-oriented courses in university studies, the carrying out of instruction, and the effectiveness of the courses (Primary population)

The Advisory Committee on University Vocationally-Oriented Courses (DYRK) expressed in its report (UKÄ, 1968) certain aims for these courses concerning their integration in university studies, the carrying out of instruction and the effectiveness of the courses. A brief description of the results in each of these areas will follow:

4.4.1 Integration of the vocationally-oriented courses in university studies

The Committee´s intention that the courses should be taken after two years´ study (i.e. after 80 points) was to a great extent achieved.

4.4.2 Carrying out of instruction

The aim here was that the vocationally-oriented courses should be taught to a great extent by those having practical experience in the particular fields in question. The subjects were asked to mark on a scale from "0" to "seven or more" the number of vocational "experts" who had participated as teachers in their courses. Practically all of the students stated that they were attending courses in which at least one expert was participating, but barely one-fifth reported the participation of more than seven specialists. There were, however, great differences between the courses in this respect.

4.4.3 Effectiveness of vocationally-oriented courses

Of the 76 % who were employed in March, 1974, 57 % were employed in the fields covered by their courses. Adult students tended to be employed to a greater extent than regular students (83 % and 69 % respectively) and their employment tended to more often be within the field covered by the course (64 % and 47 % respectively). Of the adult students who, before the studies, had been employed at least somewhat inside the fields covered by their courses, 83 % were employed inside these fields following the studies. Of those who had not been employed in fields covered by their studies, only 35 % were employed in those fields following the studies.

All groups of students rated the courses rather lowly as being a source of knowledge and skill making it easier for them to learn a new occupation. This suggests that the courses have done little in the way of helping students to enter a new profession.

Ratings of the extent to which the knowledge and skills acquired in the course were applied in the job situation were fairly high for the

students who were employed in the fields covered by their courses. Adult students, more often than regular students, found that these courses made it easier for them to adjust to their work, and they also gave higher ratings concerning the application of the knowledge and skill from the courses and the usefulness of their courses to them in their work. This applied even if allowance was made for whether employment fell within the field covered by the course or not.

5 Conclusions

The results give a rather favourable picture of the vocationally-oriented courses in terms of the types of students (i.e. adult and regular) utilizing these courses as well as the effectiveness of the courses, especially in the case of a large number of the students whose area of employment fell within the fields covered by their courses. It should be remembered, however, that only 57 % of those employed after the studies (in March, 1974) fell into this category. It seems to have been relatively difficult for students without prior experience of employment within the field covered by their courses to obtain employment in these fields after having completed the courses.

Only a limited study was made of the content and organization of the various courses. Some of the Advisory Committee´s aims appear to have been met while others have not, and this has varied considerably among the different courses. There were also rather considerable differences between the courses in other areas, e.g., background variables such as sex, employment situation, and purpose of studies as well as the ratings concerning the effectiveness/usefulness of the courses.

As has already been observed, the results and conclusions must be treated with some degree of caution, at least with regard to the assumptions concerning the effectiveness of the courses. The survey does not permit any definitive conclusions, but must be regarded as explorative, an attempt to evaluate and structure the problems connected with research in this area.

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Lars G Bäckström
Odd Pedersen